**IN THE CLAIMS:**

1. (Currently Amended) A semiconductor bonding apparatus which bonds a semiconductor chip to a mounting substrate, the semiconductor bonding apparatus comprising:

~~a holding section which holds the semiconductor chip facing the mounting substrate;~~

~~a translatory gas bearing which is connected to the holding section and which is capable of moving the semiconductor chip in a bonding direction with respect to the mounting substrate;~~

~~a voice coil motor connected to the translatory gas bearing;~~

a pressing-force adjusting section which includes (i) a holding section which holds the semiconductor chip, (ii) a translatory gas bearing which is connected to the holding section, and which is connected to the holding section, and which is capable of moving the semiconductor chip in a bonding direction with respect to the mounting substrate, and (iii) a voice coil motor connected to the translatory gas bearing, the pressing-force adjusting section generating a pressing force by using thrust generated by the voice coil motor weights of the holding section and the translatory gas bearing;

at least one load cell which detects a pressing force ~~for deforming an elastic member disposed between the semiconductor chip and the mounting substrate~~ generated by the pressing-force adjusting section; [[and]]

a driving section which generates a driving signal in accordance with the pressing force detected by the load cell to drive the voice coil motor; and

a moving section which moves the pressing-force adjusting section in the bonding direction after the pressing force generated by the pressing-force adjusting section;

wherein ~~the driving section controls the pressing force to cause the elastic member to be deformable by a desired amount~~ the moving section is controlled based on variation of the pressing force detected by the load cell, to deform an elastic member located between the semiconductor chip and the mounting substrate, whereby the semiconductor chip and the mounting substrate are bonded to each other, while being kept separated from each other by a desired distance.

2. (Currently Amended) The semiconductor bonding apparatus according to claim 1, ~~further comprising:~~

~~a moving section which moves the holding section, the translatory gas bearing, and the voice coil motor,~~

wherein the load cell is disposed between the moving section and the voice coil motor.

3. (Original) The semiconductor bonding apparatus according to claim 2, wherein the load cell is further disposed on a shaft which is a bearing object of the translatory gas bearing.

4. (Original) The semiconductor bonding apparatus according to claim 3, further comprising:

a display unit which displays the pressing force detected by the two load cells.

5. (Original) The semiconductor bonding apparatus according to claim 1, further comprising:

a moving section which moves the holding section, the translatory gas bearing, and the voice coil motor,

wherein the load cell is disposed on a shaft which is a bearing object of the translatory gas bearing.

6. (Original) The semiconductor bonding apparatus according to claim 5, further comprising:

a display unit which displays the pressing force detected by the load cell.

7. (Original) The semiconductor bonding apparatus according to claim 1, further comprising:

a display unit which displays the pressing force detected by the two load cell.

8-14. (Cancelled)